

No objections to Backward Control?¹

Artemis Alexiadouⁱ, Elena Anagnostopoulouⁱⁱ, Gianina Iordachioaiaⁱ & Mihaela Marchisⁱ
Universität Stuttgartⁱ, University of Creteⁱⁱ
artemis/gianina/mihaela@ifla.uni-stuttgart.de, elena@phl.uoc.gr

The aim of this paper is to address two main counterarguments raised in Landau (2007) against the movement analysis of Control, and especially against the phenomenon of Backward Control. The paper shows that unlike the situation described in Tsez (Polinsky & Potsdam 2002), Landau's objections do not hold for Greek and Romanian, where all obligatory control verbs exhibit Backward Control. Our results thus provide stronger empirical support for a theoretical approach to Control in terms of Movement, as defended in Hornstein (1999 and subsequent work).

1. Introduction

1.1 Two major innovations and their consequences for the theories of Control and Raising. Hornstein's approach to Control as Movement (Hornstein 1999 and subsequent work) remarkably reduces the difference between Control and Raising constructions, as shown in (1). According to this analysis, the two constructions differ only in theta theoretic terms: in Control, the moved subject checks two theta-roles, in Raising, it only checks one.

- (1) a. [TP Bill [_{VP} ~~Bill~~ tried [_{IP} ~~Bill~~ to [_{VP} ~~Bill~~ cut the line]]]] *Subject Control*
b. [TP Bill [_{VP} (Bill) seem [_{IP} ~~Bill~~ to [_{VP} ~~Bill~~ cut the line]]]] *Subject Raising*

On the basis of the copy and delete theory of movement, three types of relations can be established between two copies, depending on which of the two is pronounced: anaphora (only higher copy is pronounced), cataphora (lower copy is pronounced), resumption (both copies are pronounced):

- (2) a. [higher copy ~~lower copy~~] anaphora
b. [~~higher copy~~ lower copy] cataphora
c. [higher copy lower copy] resumption

Polinsky & Potsdam (P&P, 2007) discuss these three relations with respect to control and raising constructions as summarized in (3) below.

- (3) Typology of Control and Raising in P&P (2007):

Higher copy pronounced	Lower copy pronounced	Structure
√	*	Forward Control/Raising
*	√	Backward Control/Raising
√	√	Resumption

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While Forward Control may well be analyzed within a PRO-based approach, Backward Control can only be explained by a Movement approach and thus provides a serious challenge to the former. Evidence for Backward Raising (BR) seems scant. P&P (2007, 2008) discuss Adyghe as a language with real BR.

Evidence from more languages is provided for Backward Control (BC). B(subject)C can be observed in several Nahk-Dagestanian languages, in Northwest Caucasian, in Malagasy, and in Korean. According to P&P, Tsez offers the most compelling case of obligatory subject control.

In Tsez, an ergative language, at least two verbs (*begin* and *continue*) show an unusual agreement pattern: the higher verb must agree with the embedded ergative DP subject:

- (4) Δ_i [kid-bā_i ziya b-išra] y-/*b- oqsi
 II.ABS girl.II.ERG cowIII.abs III-feed.INF II./*III.begin-PAST.EVID
 The girl began to feed the cow

The construction in (4) displays all the typical properties of obligatory control predicates. For instance, two referential subjects are disallowed:

- (5) *kid [nelā/pro čorpa b-od-a] y-oqsi
 girl.ABS she.ERG soup.III.ABS III-make-INF II-began

The subject is in the lower clause (see also footnote 1), since its case marking is determined by the lower verb.² But, in Tsez the higher copy in the control chain, prior to deletion, can license a depictive and bind a clause-mate reflexive, as in (6):

- (6) [yesi žekā ʿagarawyo-r yutku roda] nesā nesir oqsi
 this man.I ERG relative-DAT house-ABS build.INF REFL.DAT began
 The man began for himself to build a house for his relative

P&P's conclusion to these facts is that Tsez has BC. They propose to analyse the BC construction as in (7), where the higher copy is deleted, thus instantiating the cataphora pattern in (2b).

- (7) ~~kid~~ [kid-bā_i ziya b-išra] y- oqsi
 girl.II.ABS girl.II.ERG cowIII.ABS III-feed.INF II.begin-PAST.EVID
 The girl began to feed the cow

²Event quantification suggests that in the control structure the subject is in the lower clause. (ia) is non-ambiguous: it only modifies the lower predicate. Here the adverbial cannot simultaneously follow the subject and be in the matrix clause. In (ib), the subject is in the matrix clause, hence the example is ambiguous:

- | | | | |
|-----|----|--|-----------------|
| (i) | a. | [kidbā uyrax ātiru ziya b-išra] yoqsi | Control |
| | | girl.ERG fourth time cow feed began | |
| | | The girl began to feed the cow for the forth time | four feedings |
| | | *The girl began for the forth time to feed the cow | four beginnings |
| | b. | kid uyrax ātiru ziya b-išra yoqsi | Raising |
| | | girl.ABS fourth time cow feed began | |
| | | The girl began to feed the cow for the forth time | four feedings |
| | | The girl began for the forth time to feed the cow | four beginnings |

1.2 Implications of BC for the PRO-analysis of Control and Landau's objections

As acknowledged by Landau (2007), the claim that backward control (BC) exists in natural language constitutes the strongest argument brought by the movement analysis to control against the PRO-based approach, see e.g. Landau 1999 and subsequent work. Landau (2007), however, raises two important objections to the BC analysis of Tsez: (i) *The Case Objection*: P&P run into a contradiction when they try to account for the obligatoriness of BC in the examples they discuss. On the one hand, they explain the exceptional agreement of *-oqa* 'begin' with the ergative embedded subject through the postulation of a null absolutive matrix subject triggering agreement (noun-class agreement is always with absolutive arguments in Tsez). On the other hand, however, P&P can only explain the obligatoriness of BC if they assume that absolutive case is impossible in the matrix clause (P&P 2002: 270). If the subject chain in Tsez could bear two distinct cases, ergative and absolutive (as in constructions discussed by Bejar & Massam 1999, a possibility rejected by P&P 2002: 269), then why is the merging of a second DP in the matrix clause impossible? (ii) *The 'Rarity' Objection*: BC is very rare. In Tsez only two verbs display BC. In fact only a subset of verbs that allow Obligatory Control (OC) in Tsez allows BC (M. Polinsky p.c.). In other languages the numbers hardly exceed five. Most commonly, the BC verbs are aspectuals (*begin, continue, stop*) which also have a standard raising analysis, and this casts doubt on the idea that the two BC constructions really involve Control rather than Raising.

1.3 Our contribution

On the basis of Greek and Romanian OC constructions, we argue that BC is real in these two languages. While BC has been argued in the literature to exist in Romanian, by Alboiu (2007), the phenomenon is only sporadically mentioned in analyses of Control in Greek, see e.g. Spyropoulos (2007). On the empirical side, we will complement Alboiu's arguments for Romanian, and provide substantial arguments for the existence of BC in Greek. Our main goal, however, is to address Landau's recent objections and to show that they do not hold for these two languages. First, we show that BC is exhibited by the same verbs that allow OC, and hence the 'rarity' objection doesn't hold. Second, Greek and Romanian BC constructions shed more light into the Case properties of BC chains allowing us to address Landau's case objection above.

In addition, we are interested in answering the following two questions: (1) How to account for the parametric differences between BC in Greek and Romanian as opposed to BC in Tsez? (2) How to account for the availability of BC in some languages and not in others? Our answer to question (1) will rely on an important difference between Tsez and Greek/Romanian concerning the obligatoriness vs. optionality of FC with verbs other than aspectuals. The key for an answer to question (2) seems to be provided by the fact that the languages that allow productive BC patterns show an extensive availability of clitic/agreement-associate relationships (clitic doubling). Among other things, they satisfy the EPP via V-movement (cf. A&A 1998, 2001 and see P&P (2002) for a suggestion along these lines).

2. Control subjunctives in Greek and Romanian

In both Greek and Romanian, Control is instantiated in a sub-set of subjunctive complement clauses, as these languages generally lack infinitives.³ Thus, the debate so far has mainly

³ As is well known, Greek has lost infinitives entirely. Romanian does actually have infinitives, but they aren't used in obligatory Control, only in Raising:

(i) a. Maria pare a citi (??Maria) o carte (Maria).
Mary seems to read a book

concentrated on the nature of the null subject of the subjunctive clause, i.e. whether it is *pro*, *PRO* or more recently an A-trace, (Iatridou 1988/1993, Varlokosta 1994, Terzi 1992, Tsoulas 1993, Philippaki & Katsimali 1999, Spyropoulos 2007, Kapetagianni & Seely 2007, Roussou to appear among others for Greek; Dobrovie-Sorin 1994, 2000, Motapanyane 1995, Terzi 1992, Alboiu 2007 among others for Romanian).⁴

Subjunctive complement clauses in Greek are introduced by the subjunctive marker *na* (8).⁵ In Romanian, the subjunctive marker is *să* (9). In both languages, the embedded verb, similarly to the matrix verb, shows agreement in number and person with the matrix subject.

- | | | | |
|-----|--|---------------------------------------|---------------------------------|
| (8) | O Petros/ego kser-i/-o
Peter-nom/I knows/know-1sg
Peter knows how to swim/I know how to swim | na
subj swim-3sg/-1sg | koliba-i/-o
Greek |
| (9) | Ion a uitat
Ion has forgotten-3sg subj
Ion forgot to rinse the shirt | să
limpezească
rinse-3sg | cămașa
shirt-the
Romanian |

In addition, Romanian has a second type of subjunctive complement, introduced by *ca* (the subjunctive complementizer) plus the subjunctive marker *să*. *Ca* is absent in both OC and raising complements (cf. Grosu & Horvath 1987).

- | | |
|------|---|
| (10) | Ion vrea ca să cinte la violoncel
Ion wants that subj play at cello |
|------|---|

Greek subjunctives and Romanian *să* (but not *ca să*) subjunctives lack obviation effects usually associated with subjunctives in languages like Spanish which have control infinitives. In this respect, they behave like infinitives (see Terzi 1992 for discussion).

- | | | |
|---------|--|----------|
| (11) a. | Juan _i quiere que EC _{j/*i} venga
John wants that comes-subj
'John _i wants that he _{j/*i} comes' | Spanish |
| b. | o Janis _i theli na EC _{i/j} erthi
John-nom wants subj come-3sg
'John wants that he _{i/j} comes' | Greek |
| c | Ion _i vrea să EC _{i/j} cânte la violoncel
Ion wants subj play at cello | Romanian |

-
- | | |
|----|--|
| b. | Maria incepe a citi (??Maria) o carte (Maria).
Mary starts to read a book |
| c. | *Maria stie a citi o carte.
Mary knows to read a book. |

⁴ For Greek it has been shown that in principle nominative features are available in the complement clause, see e.g. (Philippaki & Katsimali 1999, Spyropoulos 2007). The argument is based on the availability of NP-modifiers/intensifiers licensed in the lower clause by the higher subject which has been viewed as evidence that the lower subject is *pro*. Landau, however, argues that these examples can be straightforwardly accounted for in a control analysis if *PRO* bears Case.

- | | | | | |
|---------|---|------------|---------------------------------------|------------------------------|
| (i) | (O Janis) kseri
John know-3sg
'John knows how to swim by himself' | na
subj | kolimbai (o Janis)
swim-3sg (John) | monos tu
alone-nom |
| (ii) a. | Victor însuși încearcă să facă pizza
Victor himself tries subj make pizza. | ințerca să | facă | pizza |
| b. | Victor _i încearcă să facă el însuși _i pizza.
Victor _i tries subj make he himself _i pizza. | ințerca să | facă el | însuși _i pizza. |

⁵ *Na* has been analysed as a subjunctive mood marker (cf. Philippaki-Warburton & Veloudis 1984, Philippaki-Warburton 1990, Rivero 1994), a subjunctive complementizer (Tsoulas 1993, Aggouraki 1991) or a device to check EPP (Roussou to appear). Here we side with the first view.

- d. Ion_i vrea **ca** să EC*_{i/j} cânte la violoncel
 Ion wants that subj play at cello

For both languages, it has been argued in the literature that not all subjunctive clauses involve Control. Two main types of subjunctive complements have been recognized (but cf. Spyropoulos 2007 and Roussou, to appear for refinements): Obligatory Control (OC) ones and non-OC ones (NOC) (or *C(ontrolled)-subjunctives* and *F(ree)-subjunctives* in Landau's (2004) terminology).

1. **OC/C-subjunctives** are found as complements of verbs such as *ksero* 'know how', *tolmo* 'dare', *herome* 'be happy', *ksehno* 'forget', *thimame* 'remember', *matheno* 'learn', *dokimazo* 'try'; aspectual verbs, such as *arhizo* 'start/begin', *sinehizo* 'continue'.⁶ The ungrammaticality of a DP subject in the embedded clause, different from the matrix subject in (12) - (13) indicates that these verbs are OC:

- (12) a. *o Petros kseri na **kolimbao** *Greek*
 Peter-nom knows subj swim-1sg
 b. *o Petros kseri na **kolimbai** i Maria
 Peter-nom knows subj swim-3sg Mary-nom
 (13) a. *Ion stie să **cântam** la chitara *Romanian*
 Ion knows subj play-3pl at guitar
 b. *Ion stie să cânte **Victor** la chitara
 Ion knows subj play-3sg Victor at guitar

2. **NOC/F-subjunctives** appear, for instance, with volitional predicates:

- (14) a. o Petros perimeni na **erthun** *Greek*
 Peter-nom expects subj come-3pl
 Peter expects that they come
 b. o Petros elpizi na figi i **Maria**
 Peter-nom hopes subj go-3sg Mary-nom
 Peter hopes that Mary goes
 (15) a. Petru se asteaptă să **venim**. *Romanian*
 Peter refl expects subj come-1pl
 Peter expects that they come
 b. Petru speră să plece **Maria**
 Peter hopes subj go-3sg Mary-nom.
 Peter hopes that Mary goes

In both languages, OC disallows partial control (16a, 17a) or split antecedents (16b, 17b) (cf. Varlokosta 1994 for Greek; Alboiu 2007 for Romanian):

- (16) a. *I Zoi emathe na kolibane _[ECi/+] *Greek*
 Zoe-nom learnt subj swim-3pl
 b. *O Janis ipe oti i Zoi emathe na kolibane _[EC*i+j]
 John-nom said that Zoe learned-3sg subj swim-3pl
 (17) a. *Eu am învățat să **inotăm** *Romanian*
 I have learnt subj swim-1stPl

⁶ Note that many predicates that are optional control in Greek correspond to predicates that are obligatory control in English (cf. Joseph 1992, Terzi 1992, Varlokosta 1994, Martin 1996).

- b. *Ion a zis ca **tu** ai invatat sa **inotati**.
 John has said that you-sg have learnt subj swim-2ndPl

3. Backward Control

All OC verbs in both Greek and Romanian allow BC. In fact, the subject DP can appear in a number of positions, as illustrated in (18) - (19). In this respect, both languages differ from Tsez, which has either obligatory FC with most OC verbs, or obligatory BC with aspectuals (P&P 2002; see sections 4 and 5 below for more discussion).⁷ Generally, the DP in the subjunctive complement agrees with both the low and the matrix verb in person and number (see section 4 below for an important refinement):

- (18) (O **Janis**) emathe (o **Janis**) na pezi (o **Janis**) kithara (o **Janis**)
 John-nom learned-3sg John-nom subj play-3sg John-nom guitar John-nom
 Janis learned to play the guitar
- (19) (**Ion**) a uitat (**Ion**) sa cinte (**Ion**) la chitara (**Ion**)
 Ion has forgotten (Ion) subj play Ion at guitar Ion
 Ion has forgotten how to play the guitar

In what follows, we show that the pattern in which the DP appears in the complement clause is a real case of BC on the basis of P&Ps' argumentation.

3.1. No Restructuring

First we need to show that these constructions are biclausal and they cannot be analyzed as instances of restructuring (contra Roussou to appear). *Negation* and *event modification* provide evidence for this (see P&P 2008 for discussion).

The Greek and Romanian examples in (20) and (21), respectively, show that in BC constructions *two separate negations* are possible: in the matrix clause (20a, 21a), in the embedded clause (20b, 21b), or in both clauses (21c, 21c):

Greek

- (20) a. **Den** emathe na magirevi o Janis
 Not learned-3sg subj cook-3sg the Janis-nom
 'I didn't learn to cook'
- b. Emathe na **min** magirevi o Janis
 Learned-3sg subj not cook-3sg the Janis-nom
 'John learned not to cook (i.e. 'John got into the habit of not cooking')'
- c. **Den** emathe na **min** magirevi o Janis
 Not learned-3sg subj not cook-3sg the Janis-nom
 'John didn't learn not to cook (i.e. 'John still has the habit of cooking')

Romanian

- (21) a. **Nu** a invatat sa gătească Ion.
 Not has-3sg learned subj cook-3sg John-nom
 John didn't learn to cook
- b. A invatat sa **nu** gătească Ion
 Has-3sg learned subj not cook-3sg John-nom
 'John learned not to cook (i.e. 'John got into the habit of not cooking')'

⁷ See Alboiu (2007) for an analysis for each of the four positions in which the subject DP can appear in Romanian OC constructions.

- c. **Nu** a învățat să **nu** gătească Ion
 No has-3sg learned subj not cook-3sg John-nom
 John didn't learn not to cook (i.e. 'John still has the habit of cooking')

Besides negation, events modifiers can independently modify the event of each clause, as illustrated in (22) and (23):

Greek

- (22) a. Fetos emathe **tesseris fores** na pirovoli o Janis
 This year learned-3sg four times subj shoot-3sg the Janis-nom
 'This year there were four times that Janis learned how to shoot'
 b. Fetos emathe na pirovoli **tesseris fores** o Janis
 This year learned-3sg subj shoot-3sg four times the Janis-nom
 'This year John learned how to shoot four times (in a row)'

Romanian

- (23) a. Anul acesta a învățat **de patru ori** să împuște Jon
 Year-the this has-3sg learned four times subj shoot-3sg John
 'This year there were four times that Janis learned how to shoot'
 b. Anul acesta a învățat să împuște **de patru ori** Jon.
 Year-the this has-3sg learned subj shoot-3sg four times John.
 'This year John learned how to shoot four times (in a row)'

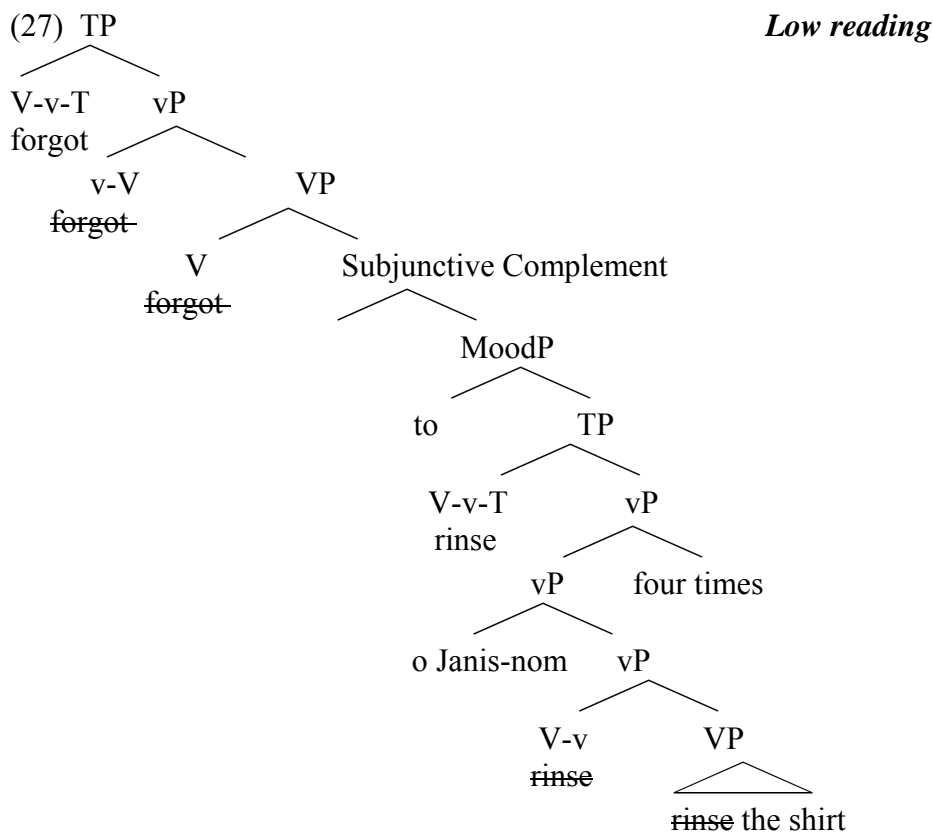
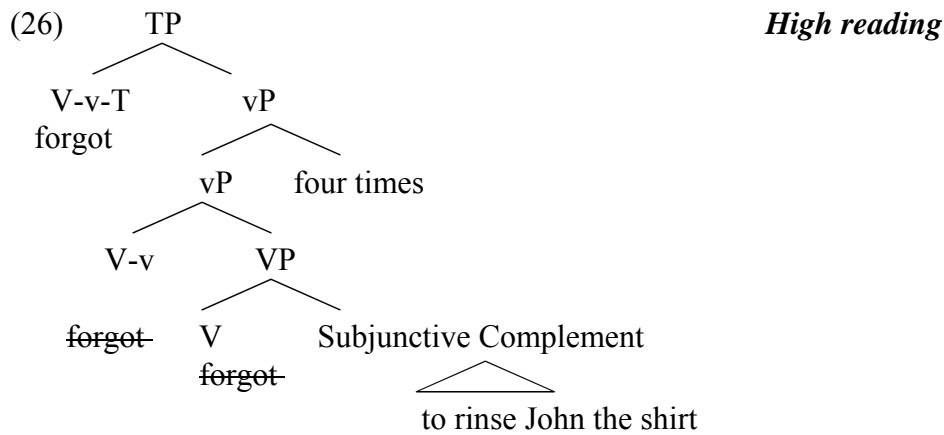
3.2 The Subject is truly embedded

Having excluded the option of restructuring (in which case apparent BC constructions would involve a single subject), we now turn to the position of the embedded subject. There are three facts clearly indicating that the subject DP remains in the embedded clause in Greek and Romanian BC constructions. First, it may *precede embedded objects*, as evidenced from the VSO order in the embedded clause in (18), (19).

Second, it can be demonstrated that the subject *precedes embedded VP-modifiers*. More specifically, clause final event adverbials have the potential of modifying either the matrix verb or the embedded one, depending on where they are situated:

- (24) a. ksehas na ksevgali o Janis to pukamiso **teseris fores**
 forgot subj rinse John the shirt four times (*four rinsings/forgettings*)
 'John forgot to rinse the shirt four times'
 b. ksehas **teseris fores** na ksevgali o Janis to pukamiso
 forgot four times subj rinse John the shirt (*four forgettings*)
 John forgot four times to rinse the shirt
 (25) a. A uitat să clateasca Ion camasa **de patru ori**.
 Has forgotten subj rinse John shirt-the of four times
 John forgot to rinse the shirt four times (*four rinsings/forgettings*)
 b. A uitat **de patru ori** să clateasca Ion camasa
 Has forgotten of four times subj rinse John shirt-the
 John forgot four times to rinse the shirt (*four forgettings*)

This difference in interpretation depends on the adjunction site of the adverb. When it modifies the matrix verb, it (right-) adjoins to the matrix vP or TP (26). On the other hand, it adjoins to the embedded vP or TP (27) when it modifies the embedded verb:



As illustrated in the tree (27), the subject necessarily resides in the embedded clause when the adverb modifies the predicate of the embedded clause.⁸ If the subject was part of the higher clause, the event adverbial would have to be higher, adjoined to the higher clause as well, resulting in the high reading obligatorily. Note that the adverb only has matrix scope in (24b), (25b) above, where it unambiguously modifies the matrix verb.

Third, evidence from *negative concord* potentially suggests that in BC the subject does not belong to the higher clause surfacing to the right of the embedded verb as a result of

⁸ As is standardly assumed, the verb raises to T in Greek and Romanian (see Alexiadou 1997; Alexiadou & Anagnostopoulou 1998, 2001 among many others). Alexiadou & Anagnostopoulou (1998, 2001) extensively argue that postverbal subjects in these languages are vP internal. The trees (26) and (27) follow these analyses for ease of exposition. The main point of the argument presented in the main text, though, does not crucially depend on this particular analysis of VSO orders.

rightward scrambling.⁹ Negative quantifiers in Greek, a negative concord language, must be either in the clause containing sentential negation (28a) or in the c-command domain of a higher sentential negation (28b). They cannot be licensed by a negation in a lower clause (28c) (see Giannakidou 1997):

- (28) a. O Petros dietakse *na* **min** apolithi **kanis**
 The Peter ordered subj not was fired nobody
 ‘Peter ordered that nobody was fired’
 b. O Petros **den** dietakse *na* apolithi **kanis**
 The Peter-nom not ordered subj was fired nobody-nom
 ‘Peter did not order that anybody was fired’
 c. ***Kanis** dietakse *na* **min** apolithi o Petros
 Nobody-nom ordered subj not fired-NACT the Peter-nom

The same pattern is found in OC contexts:

- (29) a. **Kanis** **den** tolmise *na* fai to tiri
 Nobody-nom not dared-3sg subj eat-3sg the cheese-acc
 ‘Nobody dared to eat the cheese’
 b. **Den** tolmise *na* fai **kanis** to tiri
 Not dared-3sg subj eat-3sg nobody the cheese
 ‘Nobody dared to eat the cheese’
 c. ***Kanis** tolmise *na* **min** fai to tiri
 Nobody dared-3sg subj not eat the cheese

Turning now to BC constructions, we would expect BC sentences with a low negation to have exactly the same status as (29c) - with a negative matrix subject and an embedded sentential negation - if the BC subject was part of the main clause. However, this is not what we find. There is a clear difference in status between the FC sentence (29c) and its BC counterpart (29d):

- d. %Tolmise *na* **min** fai **kanis** to tiri
 Dared-3sg subj not eat nobody the cheese

Even though (29d) is not perfect, it is much better than (29c). This provides *prima facie* evidence that the subject in BC resides in the embedded clause. Turning to a more precise analysis of the difference between (29c) and (29d), the fact that neither of them is perfect indicates that both subject copies must be licensed by negation in negative concord OC chains. In both examples, only the lower copy is licensed by negation: the covert lower copy in (29c), the overt lower copy in (29d). By contrast, (29a) and (29b) are wellformed because both copies are licensed by negation. The difference in status between (29c) and (29d) moreover suggests that the violation is stronger when the copy spelled out at PF is higher than negation, as in (29c), than when it is in the same domain as negation, as in (29d). Even though we do not have an explanation for this, we provisionally suggest that it has to do with the violation of the negative concord licensing conditions, deferring the issue to further research. As illustrated by the data in (30) and (31), the same argument carries over to Romanian where negative quantifiers behave similarly to the Greek ones concerning their licensing by negation:

⁹ We owe this argument to a suggestion made to us by Maria Polinsky and Eric Potsdam (personal communication).

- (30) a. Petru a cerut *să nu* fie concediat **nimeni**.
Peter has required subj not be fired nobody
Peter required/ordered that nobody be fired.
- b. Petru **nu** a cerut *să* fie concediat **nimeni**.
Peter not has required subj be fired nobody
Peter didn't ask for anybody to be fired.
- c. ***Nimeni** a cerut *să nu* fie concediat Petru.
nobody has asked subj not be fired Peter
- (31) a. **Nimeni nu** a îndrăznit *să* mănânce cașcavalul.
Nobody-nom not has-3sg dared subj eat-3sg cheese-the.
Nobody dared to eat the cheese.
- b. **Nu** a îndrăznit *să* mănânce **nimeni** cașcavalul.
Not has-3sg dared subj eat-3sg nobody cheese-the.
'Nobody dared to eat the cheese'
- c. ***Nimeni** a îndrăznit *să nu* mănânce cașcavalul.
Nobody has-3sg dared subj not eat-3sg cheese-the
- d. %A îndrăznit *să nu* mănânce **nimeni** cașcavalul.
Has-3sg dared subj not eat-3sg nobody cheese-the.
Dared not to eat nobody the cheese.

To conclude, so far we have presented evidence that (i) BC in Greek and Romanian does not involve restructuring and (ii) in Greek and Romanian BC constructions the subject DP is truly embedded. We now turn to the properties of the null subject in the matrix clause.

3.3 An unpronounced subject in the matrix clause

What is the nature of the unpronounced subject in BC constructions? Is there evidence for the existence of a subject movement copy in the matrix clause? The answer appears to be positive, on the basis of the following considerations.

First, we already saw that negative concord points to the existence of a higher subject copy in BC. If such a copy wasn't present, examples like (29d) and (31d) with an embedded negation licensing an embedded negative subject would be fully acceptable. Note, in this context, that Greek and Romanian constructions displaying *long distance agreement* between a matrix raising verb lacking a thematic subject and an embedded subject across a subjunctive (see Alexiadou & Anagnostopoulou 1999; P&P 2008; Alexiadou et al to appear for more details on these constructions) freely permit embedded negative subjects licensed by an embedded negation:¹⁰

- (32) a. arixse na **min** troi **kanis** to tiri *Greek*
started-3sg subj not eat-3sg nobody the cheese
- b. ***Kanis** arxise na **min** troi to tiri
Nobody started-3sg subj not eat-3sg the cheese
- c. A început să **nu** mănânce **nimeni** cașcavalul. *Romanian*

¹⁰ See Alexiadou and Anagnostopoulou (1999), Roussou (to appear) for arguments that Greek aspectuals are ambiguous qualifying as raising and OC predicates. As raising predicates they allow LDA, as in (32a), or raising as in (32b). We will come back to their behavior in section 4 where we discuss Case and Agreement in BC constructions.

- Has-3sg started subj not eat-3sg nobody cheese-the
 ‘It started to be the case that nobody eats the cheese’
 d. ***Nimeni** a început să **nu** mănânce cașcavalul.
 Nobody has-3sg started subj not eat-3sg cheese-the

As argued by Polinsky and Potsdam (2008) and Alexiadou et al (to appear), in examples like (32a) there is no subject copy in the matrix clause, and such sentences are impeccable with a low negation. The OC counterpart of (32a), however, is (29d), which is deviant, arguably due to the presence of an unpronounced matrix negative quantifier subject not licensed by a clause-mate negation.

Another set of arguments has to do with the ability of the unpronounced subject to license matrix modifiers. Recall that evidence from *depictives and reflexive binding* provided evidence for an unpronounced subject copy in the matrix clause in Tsez (see (5) above). The data with depictives are provided in (33); the depictive must be c-commanded by the phrase it modifies, hence the ungrammaticality of (33c). According to P&P (2002), the grammaticality of (33d) can only be accounted for if a higher copy of the DP is present and c-commands the depictive:

- (33) a. **kidbā** ziya **sixxoli** bišersi
 girl cow alone fed
 ‘The girl_i alone_i fed the cow’
 ‘The girl fed the cow_i alone_i’
 b. **kidbā sixxoli** ziya bišersi
 girl alone fed the cow
 ‘The girl_i alone_i fed the cow’
 *‘The girl fed the cow_i alone_i’
 c. * **sixxoli kidbā** ziya bišersi
 alone girl cow fed
 d. EC **sixxoli kidbā** ziya bišersi yoqsi
 alone girl cow fed began
 ‘The girl_i alone_i began to feed the cow’
 *‘The girl began to feed the cow_i alone_i’ (like 33b.)

A similar argument can be constructed for Greek and Romanian BC constructions. In these languages, *nominal secondary predicates and predicative modifiers* like “alone” agree in gender and number with the c-commanding DP they modify:

- (34) a. O **Janis** efiŋe **panikovlitos**/*i *Greek*
 Janis-nom left panicking-ms/fem
 lit. Janis left in panic
 b. O **Janis** irthe **monos tu**/*moni tis
 John-nom came alone-ms/alone-fem
 Janis came alone
 (35) a. **Ion** a plecat **panicat**/*ă. *Romanian*
 Ion left panicking-ms/fem
 Ion left in panic
 b. **Ion** a venit **singur**/*ă.
 Ion came alone-ms/alone-fem
 Ion came alone

In BC constructions such modifiers can be licensed in the matrix clause, while the DP they modify resides in the embedded clause:

- (36) a. thimithike **panikovlitos_i** na svisi o **Janis_i** to fos
remembered-3sg panicking-ms subj switch off Janis-nom the light-acc
Janis remembered in panic to switch off the light
- b. tolmise **monos tu_i** na lisi o **Janis_i** tis askisis
dared-3sg alone-ms subj solve Janis-nom the problems-acc
Janis dared alone to solve the problems
- c. Si-a amintit **ingrijorat_i** sã stinga **Ion_i** lumina.
ReflexD-has-3sg remembered worried-ms subj switch off John light-the
John remembered in panic to switch off the light
- d. A invatat **singur_i** sã -si rezolve **Ion_i** problemele.
Has-3sg learned alone-ms subj-reflexD solve John problems-the
John learned alone to solve the problems

Hence, a silent copy must be present in the higher clause.

It is important to note that with NOC verbs/non-subjunctives, such modifiers are not allowed to modify the embedded subject. They can only modify a null matrix subject referentially distinct from the embedded one:

- (37) a. elpizi **panikovlitos*_{i/j}** na perasi o **Janis_i** tis eksetasis¹¹
hopes panicking-ms subj pass Janis-nom the exams
- b. pistevi **panikovlitos*_{i/j}** oti tha perasi o **Janis_i** tis eksetasis
believes panicking-ms that fut pass Janis-nom the exams
- (38) a. Vrea **nerabdator*_{i/j}** sã ia **Ion_i** examenele.
Wants impatient-ms subj take John exams-the
- b. Crede **increzator*_{i/j}** cã va lua **Ion_i** examenele.
Believes optimistic-ms that fut take John exams-the

Disjointness in (37) and (38) is a Principle C effect.¹² Even though F/NOC-subjunctives and indicatives permit coreference between an overt matrix subject and a null embedded one (39a), coreference is impossible when the situation is reversed (39b) due to Principle C (the matrix pro subject c-commands the embedded DP subject):¹³

- (39) a. O **Janis_i** elpizi **pro_{i/j}** na fai to tiri
The Janis hopes pro subj eats the cheese
'John hopes that he will eat the cheese'
- b. **Pro*_{i/j}** elpizi na fai o **Janis_i** to tiri
pro hopes subj eats the Janis the cheese
'He hopes that John will eat the cheese'

¹¹ Note here that if the adjective is stressed, the construction is grammatical. But in this case the adjective has been fronted from an embedded position to the left periphery of the embedded clause, a case of A'-movement, and can reconstruct to its base position.

¹² We thank Idan Landau (personal communication) for discussion of this point. See also Alboiu (2007) for a similar discussion with respect to Romanian.

¹³ Roussou (to appear) identifies a third class of control predicates in Greek which are neither straightforwardly OC verbs nor straightforwardly NOC verbs, i.e. they have an intermediate status. It seems to us that these verbs do not show the disjointness effect illustrated in (37) and (39) above, a fact suggesting that they allow BC, patterning with OC verbs in this respect. In this paper, we discuss BC with the most restrictive class of verbs that qualify as OC under all analyses, i.e. we avoid examples based on verbs from this intermediate class.

- (40) a. **Ion_i** spera **pro_{i/j}** *să* plece la mare.
 John hopes subj leave to seaside
 John hopes to leave for the seaside.
 b. **Pro_{*i/j}** Spera *să* plece **Ion_i** la mare.
 hopes subj leave John to seaside

The fact that no Principle C effect arises in BC chains can be straightforwardly explained under a movement approach to BC, and cannot be easily accounted for if BC constructions are analysed as involving coindexation between a zero pronominal element (e.g. PRO or pro) in the matrix clause and a DP subject in the embedded clause (see P&P 2002: 263 for discussion).

A further piece of evidence for the existence of a high copy of the subject comes from *absolute constructions*. Only subjects may control in absolute constructions (see Anagnostopoulou 1999 for Greek):

- (41) a. heretise o **Janis_i** ti Maria_j **PRO_{i/*j}** fevgondas *Only Su-control*
 greeted John-Nom Mary-Acc leaving
 Janis greeted Mary leaving
 b. A salut-at-o **Ion_i** pe Maria_j **PRO_{i/??j}** trecind /plecind
 has greeted-her John PE Mary-acc passing-by /leaving
 John greeted Mary leaving/passing by

In BC constructions, the lower subject can control PRO in a higher absolute, providing evidence for a higher copy with the same reference as the lower subject:

- (42) a. thimithike [**PRO_i** fevgondas] *na* heretisi o **Janis_i** ti Maria
 remembered-3sg leaving subj greet-3sg John-nom Mary-acc
 John remembered when leaving to greet Mary
 b. [**PRO_i** Plecind] si-a amintit *să* o salute **Ion_i** pe Maria.
 PRO leaving Refl-has remembered subj her greet John PE Mary-acc
 John remembered when leaving to greet Mary

Once again, this situation contrasts with NOC verbs and non-subjunctives where Principle C effects arise:

- (43) a. **pro_j** parakalese [**PRO_{*i/j}** fevgondas] *na* heretisi o **Janis_i** ti Maria
 asked leaving subj greet Janis-nom Mary-acc
 b. **pro_j** pistepse [**PRO_{*i/j}** fevgondas] *oti* tha heretisi o **Janis_i** ti Maria
 believed leaving that fut pass greet Janis-nom Mary-acc
 (44) a. **pro_j** voia [**PRO_{*i/j}** plecind] *să* o salute **Ion_i** pe Maria
 wanted leaving subj her greet John PE Mary-acc
 b. **pro_j** credea [**PRO_{*i/j}** plecind] ca o va saluta **Ion_i** pe Maria
 believed leaving that her fut greet John PE Mary-acc

In view of the arguments presented above, we conclude that Greek and Romanian indeed have BC. Moreover, a movement analysis for BC is necessary to account for the lack of Principle C effects in BC constructions involving matrix modifiers/absolutives licensed by the embedded subject, unlike the situation in non OC constructions. BC in Greek and Romanian is optional (FC is also permitted), unlike Tsez where it is obligatory with

aspectuals. Crucially, all OC verbs in Greek and Romanian allow BC, providing a stronger argument for BC. This takes care of Landau's 'rarity' objection for Greek and Romanian. The issue is still open for Tsez and will be discussed in sections 4 and 5 below. In the next section, we turn to Case, investigating further Landau's Case objection.

4. Case properties of BC in Greek and Romanian¹⁴

Recall the Case puzzle to P&P's BC analysis of Tsez raised by Landau. In order to explain matrix agreement with the embedded ergative argument, P&P must allow a null (absolutive) copy controlling matrix agreement (P&P 2002: 248). On the other hand, P&P must exclude the realization (checking) of matrix absolutive Case (P&P 2002: 269-270) in order to explain the obligatoriness of BC. Given the existence of productive BC in Greek and Romanian, the question arises whether these languages have constructions which may shed more light into this puzzle. Are there any Greek and Romanian BC constructions closely resembling the ones in Tsez with respect to Case? And since BC is optional in these languages, what do we learn from comparing BC to FC in Case chains of this type?

Examples closely resembling BC constructions in Tsez can indeed be constructed for Greek and Romanian with OC verbs embedding subjunctives with a quirky (dative) subject. Quirky subject constructions have been argued to occur in Greek with 'piacere-type' psychological predicates (Anagnostopoulou 1999) and with certain unaccusatives (Anagnostopoulou & Everaert 1996, 1999; Anagnostopoulou 2003); similarly for Romanian (Alboiu 2007, Rivero & Geber 2007). Embedding a quirky subject construction under an OC verb leads to sentences like the following:¹⁵

- (45) a. ?**Tolmise** *na* tis aresun tis **Marias**
Dared-3sg subj cl-gen please-3pl the Mary-gen
i operes
the operas-nom
'Mary dared to like operas'
- b. ?**Borese** *na* min tu ksefigun tu **Janni**
Could-3sg subj not cl-gen escape-3pl the Janni-gen
polla lathi
many mistakes
'John managed so that not many mistakes escaped his attention'
- (46) a. ?**A invatat** *să* -i placă **Mariei** concertele
Has-3sg learned subj-cliticD like-3pl Mary-gen concerts-pl
'Mary learned to enjoy the concerts'.
- b. ?**A invatat** *să* nu-i (mai) scape **lui Ion** greseli.
Has-3sg learned subj not-cl.dat (anymore) escape John-dat mistakes
'John learned not to miss mistakes anymore'.

In these examples, the matrix predicate appears to agree in person and number with the embedded quirky dative subject¹⁶, while embedded verb agreement is controlled by the

¹⁴ We thank Idan Landau (personal communication) for clarifying the Case issue and for suggesting potential test sentences to us.

¹⁵ All BC constructions discussed in this section have a slightly marginal status indicated by a question mark. We would not be surprised if they were rejected by some speakers.

¹⁶ Greek has lost the distinction between genitive and dative case and has generalized the use of genitive. In the literature on Greek, the term dative argument/quirky dative subject is often employed to refer to arguments carrying morphological genitive case.

nominative theme. As a result, the matrix verb shows third person singular and the embedded verb third person plural agreement when the embedded quirky subject is singular and the nominative argument plural.

4.1 A comparison to Tsez with respect to the Control chain

With respect to the Case of the argument entering Control, examples like (45)/(46) are identical to the Tsez examples discussed by P&P (2002). The apparent agreement between the matrix verb and the embedded quirky dative leads to the postulation of a null 3rd person singular nominative subject in the matrix clause because datives never control agreement in Greek, only nominatives do (Anagnostopoulou 1999, 2003).

- (45') a. ? Δ_i **Tolmise** *na* tis_i aresun tis **Marias_i**
 Dared-3sg subj cl-gen please-3pl the Mary-gen
 i operes
 the operas-nom
 'Mary dared to like operas'
- b. ? Δ_i **Borese** *na* min tu_i ksefigun tu **Janni_i**
 Could-3sg subj not cl-gen escape-3pl the Janni-gen
 polla lathi
 many mistakes
 'John managed so that not many mistakes escaped his attention'

In (45') the null nominative corresponds exactly to the null absolutive subject in the Tsez sentence (4), here repeated, and the coindexed embedded quirky dative in (45') is the counterpart of the embedded ergative subject in (4).

- (4) Δ_i [kid-bā_i ziya b-išra] y-/*b- oqsi
 II.ABS **girl.II.ERG** cowIII.abs III-feed.INF **II./*III.begin-PAST.EVID**
 'The girl began to feed the cow'

Can we propose for the Greek (45') and its Romanian counterpart that the higher null subject copy does not actually have nominative Case, similarly to what P&P propose for Tsez? There are three reasons why the answer to this question is negative.

First, at least in the Greek quirky control constructions under discussion modifiers can be licensed in the matrix clause. Since modifiers like 'alone' agree in Case with the element they modify, their presence points to the conclusion that the empty subject in the matrix clause bears nominative Case.¹⁷

- (47) **Emathe** **moni tis** *na* tis aresun
 Learned-3sg alone-nom-cl-gen, fem subj cl-gen please-3spl
 tis **Marias** i operes
 the Maria-gen the operas-nom
 'Mary learned on her own/alone to like operas'

Second, it can be independently shown that Greek and Romanian control verbs check nominative on their subject. More specifically, P&P (2002: 270) argue that control *-oqa*

¹⁷ The presence of nominative Case on such modifiers has been argued for Greek in Philippaki-Warbuton & Catsimali (1999) and more recently by Spyropoulos (2007). Since this has not been yet shown to be the case in Romanian modifiers, we concentrate here exclusively on the Greek examples.

‘begin’ lacks an absolutive Case feature on the basis of the observation that this verb cannot be used in any configuration in which it would license an absolutive argument. Thus, the following are excluded in Tsez (P&P’s examples (66)):

- (48) a. *kid-bā say b-oq-si
 girl-ERG treatment.III.ABS III-begin-PAST.EVID
 ‘The girl began the treatment’
 b. *say b-oq-si
 treatment.III.ABS III-begin-PAST.EVID ‘The treatment began’

Crucially, this argument cannot be extended to Greek and Romanian OC verbs allowing BC, as these verbs routinely license nominative arguments in comparable configurations:

- (49) O **Janis** emathe /ksehas/ thimithike ti lisi
 The Janis-nom learned-3sg/forgot-3sg/remembered-3sg the solution-acc
 ‘Janis learned/ forgot/ remembered the solution’
 (50) **Ion** a învățat/ a uitat/ și-a amintit soluția.
 Ion has-3sg learned/ has-3sg forgotten/refl-dat-has-3sg remembered solution-the
 ‘John learned/ forgot/ remembered the solution’

Finally, FC is possible with all OC verbs alternating freely with BC, as has often been mentioned above. This means that one would never want to exclude the possibility of FC for Greek and Romanian, unlike the situation in Tsez, where BC is obligatory with aspectuals and impossible otherwise. In the quirky subject constructions discussed in this section, FC leads to a copy chain in the sense of Ura (1996), i.e. the matrix subject DP bears nominative Case while the embedded quirky subject is realized as a pronominal clitic spelling out its Case (genitive/ dative) and phi-features:¹⁸

- (51) a. I **Maria_i** tolmise *na* **tis_i** aresun Δ_i
 The Mary-nom dared-3sg subj cl-gen please-3pl
 i operes
 the operas-nom
 ‘Mary dared to like operas’
 b. O **Janis_i** borese *na* min **tu_i** ksefigun Δ_i
 The Janis-nom could-3sg subj not cl-gen escape-3pl
 polla lathi
 many mistakes
 ‘John managed so that not many mistakes escaped his attention’
 (52) a. **Maria_i** a îndrăznit să-**i** placă concertele.
 Mary has-3sg dared subj-cl-dat like-3pl concerts-the.
 ‘Mary dared to like concerts’
 b. **Ion_i** a reușit să nu-**i** scape multe greșeli.
 John has-3sg managed subj not-cl-dat escape-3pl many mistakes
 ‘John managed so that not many mistakes escaped his attention’

¹⁸ This clitic is obligatory, presumably because the features of the dative must be realized, i.e. Greek and Romanian can’t have a radically zero ‘quirky PRO’ in the sense of Icelandic, Russian and Hungarian.

We conclude that Greek and Romanian have control constructions exactly mirroring the ones found in Tsez, with one crucial difference. The postulated matrix nominative argument entering BC with the embedded quirky dative in Greek and Romanian clearly bears nominative Case; for Tsez the availability of absolutive Case for the matrix subject is not evident.

4.2 Multiply Case Marked Chains

The above discussion leads us to propose that both subject copies bear Case in Greek and Romanian BC constructions. In a movement approach to Control, this entails the existence of a subject A-chain bearing two distinct Cases.

Multiple Case marked A-chains have been argued to exist in the literature (Massam 1985, McCreight 1988, Harbert 1989, Yoon 1996, Bejar & Massam 1999; Ura 1996: 96-97 also considers this possibility for copy raising constructions; Potsdam 2008 explicitly adopts this for Malagasy BC patterns). An example of a Multiply Case Marked Chain from Niuean is provided in (53) (from Bejar & Massam 1999: 67):

- (53) a. Manako a ia ke momohe **[e na tama]**
 want ABS he subj sleep ABS pair child
 ‘He wants the two children to sleep’
- b. Manako a ia **[ke he na tama]_i** ke momohe **t_i**
 want ABS he MIDDLE pair child subj sleep
 ‘He wants the two children to sleep’

In (53b), a multiple Case A movement construction, the DP *na tama* is merged in the subject position of the embedded clause, where it receives absolutive Case, as shown in (53a). The subject subsequently raises to a higher position where it receives middle structural Case. The chain between *na tama* and its trace bears a single theta role but two Structural Cases, a low absolutive and a high middle. It seems that in such Structural-Structural Case Chains, it is always the higher Case which is realised (see Bejar & Massam 1999 for discussion).

Note that Greek seems to provide independent evidence for the existence of such Multiple Case A-Chains. In causative constructions, the embedded subject originates in the lower clause checking nominative Case (as shown by the licensing of the nominative modifier in (54)) and then it undergoes raising to the matrix object position checking Accusative under ECM:

- (54) I Maria ekane ton Jani_i na t_i klapsi orgismenos
 The Mary made the Janis-acc subj cries-3sg angry-nom
 ‘Mary made John cry angry’

Clearly, (54) is an ECM (and not an Object Control) construction, i.e. *ton Jani* is assigned a theta-role only as a subject of ‘cries’ and not as the object of the causative verb.

4.3 Two Cases: an argument against Movement?

Landau (2003, 2007) argues that there is a crucial contrast between raising and control constructions which supports a non-movement approach to Control. This difference is revealed from languages with case concord, like Icelandic. When the embedded predicate assigns quirky case to its subject in Icelandic, this case shows up on the matrix subject in raising but not in control constructions. The matrix controller bears nominative, while PRO

bears quirky case, as shown by agreeing elements like floating quantifiers or depictives. Schematically, this contrast is illustrated in (55) (from Landau 2007: 305):

(55) *Icelandic*

- a. *Raising*
 $DP_{iDAT} \dots V \dots [t_i \dots V \dots FQ_{DAT}]$
- b. *Control*
 $DP_{iNOM} \dots V \dots [PRO_i \dots V \dots FQ_{DAT}]$

According to Landau, this difference is expected under the traditional assumption that only one chain is involved in raising and two in control, while at the same time it argues against the control-as-movement analysis.

Interestingly, a comparable difference between raising and control can be reproduced for Greek, manifesting itself most clearly on agreement rather than Case. As already mentioned in the context of the discussion of (32) above (and see, in particular, fn 10), Greek aspectual verbs ‘begin’ and ‘stop’ are ambiguous between OC and Raising. When a quirky subject construction is embedded under such verbs, OC aspectuals agree in person and number with the embedded quirky dative subject, similarly to what we saw above (56a). On the other hand, raising aspectuals agree in person and number with the embedded nominative theme argument, regardless of the surface position of the quirky subject, i.e. whether it remains in the embedded clause (as in 56b) or it raises to the matrix clause (as in 56c):¹⁹

- (56) a. ?Arxise na min tis ksefevgun tis Marias
 Started-**3sg** subj not cl-gen escape-3pl the Mary-gen
 polla lathi
 many mistakes-pl
 ‘Mary started not to miss so many mistakes’
- b. Arxisan na min tis ksefevgun tis Marias
 Started-**3pl** subj not cl-gen escape-3pl the Mary-gen
 polla lathi
 many mistakes-pl
- c. Tis Marias arxisan na min tis ksefevgun
 The Mary-gen started-**3pl** subj not cl-gen escape-3pl
 polla lathi
 many mistakes-pl

That (56a) contains a thematic subject position while (56b) doesn’t is evidenced by the fact that agent-oriented adverbs are licensed in (56a) but not in (56b)/(56c), as shown in (57):

- (57) a. Epitides arxise na min tis ksefevgun
 On purpose started-**3sg** subj not cl-gen escape-3pl
 tis Marias polla lathi
 the Mary-gen many mistakes-pl
 ‘Mary deliberately started not to miss so many mistakes’
- b. *Epitides arxisan na min tis ksefevgun
 On purpose started-**3pl** subj not cl-gen escape-3pl

¹⁹ (56b) is a Backward Raising construction (analysed as Long Distance Agreement in Polinsky & Potsdam 2008, Alexiadou et al. to appear; see section 3.3 above), while (56c) combines movement (raising?) of the quirky subject and Long Distance Agreement with the embedded nominative.

	tis	Marias		polla	lathi				
	the	Mary-gen		many	mistakes-pl				
c.	*Tis	Marias		arxisan	epitides	na	min	tis	
	The	Mary-gen		started-3pl	deliberately	subj	not	cl-gen	
	ksefevgun		polla	lathi					
	escape-3pl		many	mistakes-pl					

The raising vs. control contrast with respect to Case in Icelandic (55) (one Case vs. two Cases) surfaces as an agreement contrast in Greek: one agreement chain is involved in raising (56b,c), while two agreement chains in control (56a).

Can we propose on the basis of this asymmetry that there are two chains involved in (56a), i.e. that there is no movement involved in Control? The obvious problem for such an analysis is that (56a) is a BC construction. If the zero matrix subject is PRO, then several difficulties arise (as pointed out by P&P 2002, as mentioned above, as acknowledged by Landau 2007):

- (57) (i) PRO-based theories cannot explain how PRO can be licensed and interpreted in a position higher than the controller's.
- (ii) PRO-based theories cannot explain why there are no Principle C effects in BC constructions, unlike constructions with NOC verbs/non-subjunctives, which show Principle C effects when the matrix subject is null and the embedded subject overt (see the discussion of (36)-(40) above).

Even though there clearly is much more to be said about the difference between Control and Raising with respect to the question of one vs. two Cases/Agreements, our conclusion at this point is that this asymmetry is orthogonal to the movement vs. PRO analysis. After all, there are many uncontroversial examples of Multiply Case Marked A-Movement Chains across languages, as has been discussed in the previous section.

5. How to account for the BC parameter

In the preceding sections, we argued that Greek and Romanian present a stronger argument for BC because (i) BC freely obtains with all OC verbs and (ii) the quirky subject data clearly suggest that Control chains are Multiply Case Marked Chains. Hence, Landau's (2007) objections for BC in Tsez do not extend to Greek and Romanian BC. Before closing this paper, we would like to address two questions concerning the parametric availability of BC: (1) How can we account for the parametric differences between BC in Greek and Romanian as opposed to Tsez? (2) What is the explanation for the availability of BC in some languages and not in others? In what follows, we address these in turn.

5.1 A potential answer to question 1

There are two main differences between Tsez and Greek/Romanian BC: (i) *Productivity*. In Tsez, BC is possible only with aspectuals, while in Greek and Romanian it is allowed with all OC verbs. (ii) *Obligatoriness vs. optionality*. In Tsez, BC is obligatory when possible, while it is optional in Greek and Romanian.

We believe that these two differences are connected and that the key to explaining the differences between Tsez and Greek/Romanian BC is provided by the obligatoriness vs. optionality of FC. More specifically, we propose that Tsez is basically a FC language, like English and Icelandic. The only construction where BC obtains is with aspectuals which have

been independently argued by P&P (2002) to be Case deficient, i.e. not capable of licensing absolutive Case (see P&P's discussion of (49) above and its implications for BC). Since absolutive is impossible in the matrix clause, the only other option available is to realise the ergative subject in the embedded clause, resulting in obligatory BC. This leads us to conclude that P&P (2002) are correct for Tsez: the impossibility of realizing absolutive Case in the matrix clause indeed explains why OC is obligatory with aspectuals. The hypothesis that Tsez is basically a FC language furthermore explains why OC is limited to aspectuals.

Greek and Romanian differ from English, Icelandic and Tsez in freely allowing BC along with FC. The question is why these languages permit BC, an option excluded in English, Icelandic (and Tsez).

5.2 Towards an answer to question 2

In answering this question, we have to identify the properties that Greek and Romanian have in common which can potentially explain the common BC behavior. At this point, we can enumerate the following characteristics that are shared by the two languages and not by other languages like, for instance, English:

1. Subjunctives in OC (and no infinitives)
2. pro-drop
3. VSO orders with VP-internal subjects (Alexiadou & Anagnostopoulou 2001)
4. Clitic doubling
5. EPP checking via V-movement (Alexiadou & Anagnostopoulou 1998)

The fact that both Greek and Romanian have OC subjunctives cannot be the reason for the BC split, for the following three reasons at least: (i) Romanian does have infinitival complements with raising verbs and they behave similarly to subjunctives;²⁰ (ii) Bulgarian lacks OC infinitives but lacks BC, as well (Adrian Krastev p.c.); (iii) Spanish has OC infinitives, and yet it exhibits BC.

Importantly, Spanish shares with Greek and Romanian the other properties listed above, namely (2)-(5).

5.3 BC in Spanish

Like in Greek and Romanian, the subject in Spanish OC constructions is quite flexible with respect to its PF position:

- (59) (Juan) aprendió a tocar (Juan) guitarra (Juan)
 (John) learned to play (John) guitar (John)
 'John learned to play the guitar'

In (59), the embedded subject DP is truly in the low clause, since it precedes objects and VP-modifiers (cf. (18), (19) and (24a), (25a) above):

- (60) Olvidó enjuagar Juan la camiseta cuatro veces. (*four rinsings/four forgettings*)
 Forgot rinse John the shirt four times
 'John forgot to rinse the shirt four times'

²⁰ Note also here that the languages discussed by P&P have infinitives in BC.

Moreover, the licensing of modifiers in the matrix clause indicates the presence of a higher copy (cf. (36) above):

- (61) a. Se recordó preocupado de apagar Juan la luz.
 remembered-3sg worried-ms to switch off John the light
 ‘John remembered worried to switch off the light’
 b. Aprendió solo resolver Juan los problemas.
 learned-3sg alone-ms to solve John the problems
 ‘John learned alone to solve the problems’

Finally, Spanish provides evidence for the existence of multiple Case chains, as the examples in (62) show, cf. (45-47) above:

- (62) a. ?Aprendió a gustarle a María los conciertos.
 Learn-3sg to like-cliticD to Mary the concerts.
 Mary learned to enjoy the concerts.
 b. Aprendió sola a gustarle a María los conciertos.
 Learned-3sg alone-nom-sg subj-cl-gen like-3pl Mary-**dat** concerts-the
 Mary learned on her own/alone to like concerts’

It can thus be concluded that the existence of productive BC patterns derives from the properties in 2-5 above, i.e. pro-drop, VSO orders with vP-internal subjects, clitic doubling and EPP checking via V-raising. A&A (1998, 2001) proposed that these properties are a reflex of a single one: the extensive availability of agreement-associate relationships of the clitic doubling type in a language. Unlike long distance Agree, doubling involves movement of the clitic/agreement without phrasal pied piping (Anagnostopoulou 2003, Preminger 2008). We propose that this permits checking of Case and EPP features of matrix T and allows the DP to remain *in situ* in BC constructions.

6. Open Questions

In this paper we hope to have provided stronger empirical support for the analysis of Control as movement. We have further provided a possible explanation for the parametric availability of BC, which certainly needs to be spelled out in more detail, an enterprise we leave for future work.

A further open issue concerns the properties of the environments that permit BC as well as OC. As has been pointed out in the literature, these are characterized by *the absence of morphological and semantic Tense* (Iatridou 1988/1993, Varlokosta 1994 for Greek; Alboiu 2007 for Romanian). In current theoretical terms (Chomsky 2007), where Tense features are a property of C inherited by T, this could be translated as meaning that the embedded clause does not contain a CP or rather no phase level, a claim made explicitly by Alboiu (2007) for Romanian. Since C is missing, Tense is also missing. A consequence of this analysis is that phi-features are not (necessarily) a property of C since they are present in Greek and Romanian embedded subjunctives allowing BC. Obviously this analysis is incompatible with Chomsky's (2001) claim that T has phi-features only as a result of Transfer from C, as well as with the standard view on control structures that these involve a CP layer (which seems to be supported by the observation that BC constructions have Case, as opposed to raising constructions, see Alexiadou & al. to appear). We leave this issue for further research.

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